REMARKS

This Application has been carefully reviewed in light of the Office Action mailed February 18, 2009. At the time of the Office Action, Claims 1-16 were pending in this Application. Claims 1-7 and 10-16 were rejected. Claims 8-9 were previously withdrawn due to an election/restriction requirement. Applicant respectfully requests reconsideration and favorable action in this case.

Specification Objection

The specification was objected to as having an informality relative to reference character 31 and "tube-shaped body". In response, the specification is hereby amended to correct the informality.

Rejections under 35 U.S.C. § 102

Claims 1, 4, 10, and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shen (US 6,499,471) ("*Shen*"). Applicant respectfully traverses and submits that *Shen* does not teach all of the elements of the claimed embodiment of the invention.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "the identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co. Ltd.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Applicant respectfully submits that *Voigt* cannot anticipate the rejected Claims, because *Voigt* does not show all the elements of the present Claims.

Claim 1 recites "a means for pretensioning, that is supported by the tube-shaped body and pretensions the piezoelectric actuator." Claim 10 recites "a piezoelectric actuator pretensioning device supported by the tube-shaped body." The specification teaches a bolt for pretensioning.

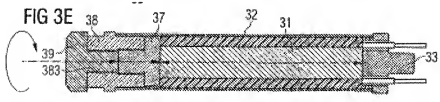
> A bolt 39 is screwed into the tube-shaped body 38 which comprises a respective thread 383. Depending on how far the bolt 39 is screwed into the thread 383 a pretension force is exerted on the piezo actuator 31 via the body 37. Therefore the pretension force can be easily adjusted. The bolt 39 may be spherically shaped on its shaft side.

(Specification at [0026]).

> In the next step (Figure 3E) a bolt 39 is screwed into a thread 383 of the tube shaped body 38. The bolt 39 is screwed into thread 383 until the exerted force on the piezo actuator 31 reaches a given value. In order to keep the bolt 39 in its exact position after that, it may be welded or soldered to the tube-shaped body 38.

(Specification at [0029]).

FIG 3E



(Specification at Figure 3E).

Alternatively, *Shen* discloses a "hydraulic compensator assembly," which is not at all similar to the elements claimed in claims 1 and 10 noted above. In particular, *Shen* teaches,

> FIG. 2 is an enlarged view of a first embodiment of a hydraulic compensator assembly 16. Hydraulic compensator assembly 16 includes a bellows 50, a piston 51, a bellows weld ring 52, an orifice screw 53, O-rings 54 and 55, a compression spring 56, hydraulic oil 57, an orifice 58 and a supply reservoir 59. O-ring 54 may be a "Parker" type O-ring, and O-ring 55 may be an "Apple" type O-ring. Bellows 50 may be used in the hydraulic compensator assembly 16 because of its superior wear-resistant properties as compared to an O-ring. Piston 51 can be operatively connected to top 15 of piezoelectric actuator stack 22 so that any axial translation of piston 51 is directly transmitted to piezoelectric actuator stack 22.

(*Shen* at 3:41-53).

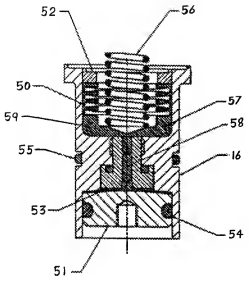


FIG. 2

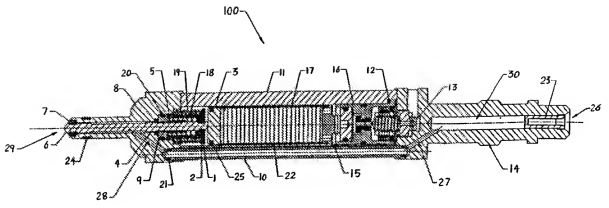
(*Shen* at Figure 2). The purpose of the "hydraulic compensator assembly" is to compensate for fluctuations in temperature as the entire fuel injector expands and contracts to ensure that the injector needle maintains contact with the injector seat.

> During subsequent fluctuations in temperature around the fuel injector assembly 100, any further expansion or contraction of inlet cap 14, injector housing 11 and valve body 8 causes the high viscosity hydraulic oil 80 to travel from or into reservoir 81, through orifice 82. Thus bottom 3 is maintained in constant contact with the contact surface of valve needle 6.

(*Shen* at 4:36-42). Shen further teaches that a screw may be used to properly position the "hydraulic compensator assembly."

> Referring also to FIG. 1, fuel injector assembly 100 further includes a crush ring 12 and an adjusting screw 13. Crush ring 12 adjusts the axial positioning of hydraulic compensator assembly 16 (or 70) relative to the housing 11. Adjusting screw 13 allows pre-adjustment of the axial location of hydraulic compensator assembly 16 (or 70) relative to piezoelectric actuator stack 17, as well as pre-adjustment of the spring factor of compression spring 56 (or 79).

(*Shen* at 5:49-57).



(*Shen* at Figure 1). However, the screw 13 merely adjusts the axial location of hydraulic compensator assembly 16 (or 70) relative to piezoelectric actuator stack 17, as well as pre-adjustment of the spring factor of compression spring 56 (or 79). It does not function to pretension the tube spring 17. Rather, *Shen* merely teaches that there is "a tube spring 17 for pre-compressing the piezoelectric actuator stack 22." (*Shen* at 3:7-8). Shen teaches that the piezoelectric actuator stack 22 is assembled in the tube spring 17, but it does not explain how. (*See Shen* at 3:7-31). After the actuator/spring subassembly is put together, it is assembled in the fuel injector to be engaged by the hydraulic compensator assembly.

> Piezoelectric actuator stack 22 is guided along housing 11 by means of guides 25. The piezoelectric actuator stack 22 has a first end in operative contact with valve needle 6 by means of bottom 3, and a second end that is operatively connected to hydraulic compensator assembly 16 by means of a top 15.

(*Shen* at 3:26-31). Thus, because the screw 13 does nothing to pretension the tube spring 17 when it is being assembled with the piezoelectric actuator stack 17, the invention as claimed in claims 1 and 10 is patentable in view of *Shen*. The invention as claimed in claims 4 and 13 is patentable for similar reasons.

Rejections under 35 U.S.C. §103

Claims 2-3, 5-7, 11-12 and 14-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shen (US 6,499,471) ("*Shen*") in view of U.S. Patent No. 6,326,717 issued to Patrick Mattes ("*Mattes*").

Applicant respectfully submits that dependent Claims 2-6 and 11-15 are allowable at least because they depend from Claims 1 and 10, shown above to be allowable in view of *Shen*. *Mattes* also fails to teach the features of the invention claimed in claims 1 and 10. Thus, the invention as claimed in claims 1 and 10 is patentable in view of the combined teachings of *Shen* and *Mattes*. Applicant reserves the right to make further arguments regarding the Examiner's rejections under 35 U.S.C. §103(a), if necessary, and does not concede that the Examiner's proposed combination is proper.

CONCLUSION

Applicants have made an earnest effort to place this case in condition for allowance in light of the remarks set forth above. Applicants respectfully request reconsideration of the pending claims.

Applicants believe there are no additional fees due at this time. However, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-4871 of King & Spalding LLP.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.457.2026.

Respectfully submitted,
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